

REMARKS

The present amendment is submitted in response to the Office Action dated September 7, 2005, which set a three-month period for response, making this amendment due by December 7, 2005.

Claims 1-4, 6-8, and 10-12 are pending in this application.

In the Office Action, the specification was objected to for various informalities. The drawings were objected to for containing boxes that have not been textually labeled. Claims 1 and 7 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 1-5 and 7-9 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,433,503 to Uematsu et al. Claims 6 and 10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Uematsu and U.S. Patent No. 4,374,347 to Mueller.

In this amendment, the specification was amended to add sectional headings. Figure 1 was amended to add labels to the boxes, as requested.

Claims 1 and 7 were amended to delete the "in particular..." phrases, respectively. These limitations are now included in new claims 11 and 12.

In addition, claims 1 and 7 were amended to more clearly define the present invention over the cited art. Specifically, claim 1 was amended to add the features of claim 5 and claim 7 now includes the features of claim 9. Claims 5 and 9 were canceled.

Amended claim 1 defines "a circuit arrangement for operating an electric motor in a direct voltage source, having a rotary position transducer for detecting

the rotary position of the rotor, and having an electronic commutation controller for switching over the current in the armature winding of the stator as a function of the position of the rotor, wherein the rotary position transducer (32) is positioned relative to the stator (12) for an early commutation, and wherein the actual commutation time can be set by means of a delay correction, ascertained by measurement for the motor, in the electronic commutation controller (30)". Amended claim 1 defines further that the "amount of the delay between the signal of the rotary transducer (32) and the signal output of the commutation controller (30) is ascertained by a measuring device (34) and stored in a permanent memory (T) of the commutation controller (30)".

Method claim 7 defines a "method for operating an electric motor in a direct voltage source, having a rotary position transducer for detecting the rotary position of the rotor, and having an electronic commutation controller for switching over the current in the armature winding of the stator as a function of the position of the rotor, wherein by means of the mechanical positioning of the rotary position transducer (32), an early commutation time is set which afterwards, by means of a correction ascertained by measurement for each motor (10), is delayed in the electronic commutation controller (30) to the optimal commutation time of the motor (10), taking into account mechanical, magnetic and/or electrical tolerances". Amended claim 7 now defines further that "the signals for the commutation time are furnished by a rotary position transducer (32) to a commutation controller (30), are stored in memory by the commutation controller, and are delayed by waiting cycles, determined by an external

measuring device (#4), after the signal change in the rotary position transducer (32) is detected".

The Applicants respectfully disagree that the cited patent to Uematsu et al anticipates the subject matter of original claims 5 and 9, now included in amended claim 1 and 7, respectively. Specifically, the present invention is distinct from Uematsu for at least three reasons. First, Uematsu et al do not show an ascertainment of the amount of the delay between the signal of the rotary position transducer (rotor position detector 23) and the signal output of the commutation controller (processing unit 10). This would only be possible if the output signal of the rotor position detector 3 is compared directly or by the use of a further sensor with the output signal of the processing unit 10, which is not the case, as can be seen in Fig. 2 of the Uematsu reference, since the driving unit 21 is not capable of measuring this delay.

Contrary to the Examiner's opinion, the period measuring circuit 18 merely measures the period of time T_m between rotor position signals output by the delay circuit 17. The output signal of the period measuring circuit 18 is then used to determine the rotational speed of the rotor by a rotating speed calculator 19 (see Uematsu, column 6, lines 51-56). Thus, the circuit 18 does not measure the time between the output signals from the position detector 23 and the processing unit 10.

Second, Uematsu et al do not show a measuring device for ascertaining the amount of the delay between the signal of the rotor position detector 23 and the signal output of the driving circuit 21.

Third, Uematsu et al does not show a permanent memory for storing the amount of the delay between the signal of the rotary position transducer and the signal output of the communication controller.


Based on these reason, the Applicants respectfully submit that amended claims 1 and 7, as well as their respective dependent claims, are patentable over the Uematsu reference. The cited patent to Mueller does not even show means of a delay correction for setting the actual commutation time, in addition to the newly added features of claims 1 and 7.

Because amended claims 1 and 7 includes features that are not disclosed or shown in Uematsu, the rejection under 35 U.S.C. 102 must be withdrawn. Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. ***Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.***, 221 USPQ 481, 485 (Fed. Cir. 1984).

For the reasons set forth above, the Applicants respectfully submit that claims 1-4, 6-8, and 10-12 are patentable over the cited art. The Applicants further request withdrawal of the rejections under 35 U.S.C. 102 and 103 and reconsideration of the claims as herein amended.

Should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call in order to discuss appropriate claim language that will place the application into condition for allowance.

~~Respectfully submitted,~~



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